

REMARKS

This responds to the Office Action dated 24 May 2005. Applicant respectfully requests reconsideration of the application in view of the foregoing amendments and following remarks. Claims 19, 26-29, 37-40, 46, and 67 have been amended. Claim 67 is amended to correct a typographical error only, and has not been narrowed in any way. Claim 67 retains its previous scope. Claims 1-6, 8-12, 14-24, 26-31, 33, 35-42, 44-46, 48-49, 52-58, 60-63, 65-70, 72-73, and 75 remain pending in the application.

Withdrawal from Allowance

Applicant regrets the withdrawal from allowance and does not understand how the case went from all claims being deemed allowable to all claims being rejected. During a telephone discussion between William B. Batzer and Examiner Paumen, the Examiner agreed that the dielectric materials described in the present specification are clearly distinguished over the types of insulative materials used in related prior art *electrical feedthrus*. The new references cited do not change this agreed fact as to *electrical feedthrus*, and the Examiner has not presented a supportable case for rejecting the claims that were once allowable.

Claim Rejections – 35 U.S.C. § 103

The Examiner rejected claims 1, 2, 4-6, 8, 9-12, 14, 20-23, 26-31, 33, 35-42, 44, 45, 48, 49, 52-58, 60-63, 67, 69, 70, 73, and 75 under 35 U.S.C. § 103(a) as being unpatentable over Fig. 1 of the present specification in view of U.S. Patent No. 6,023,025 to Nakahigashi et al. (“the ‘025 patent”). Applicant respectfully traverses the rejection.

As the Examiner knows, for a claim to be obvious, there must be a) a suggestion or motivation to combine reference teachings, b) a reasonable expectation of success, and c) the references must identically teach all of the claims limitations. MPEP § 706.02(j). As described below, the Office has not established each of these requirements, and therefore has not met its burden of establishing a *prima facie* case of obviousness. Accordingly, the § 103(a) rejection is improper and should be withdrawn.

To begin with, the Office mischaracterizes the prior art represented by Fig. 1 of the present application. The Office states that “the admitted prior art shows...a MEMS package, six electrically conductive transmission line[s] [sic] 8...and dielectric adhesive 30’.” Nevertheless, Fig. 1 is *not* identified as a MEMS package, and Fig. 1 does not represent a MEMS package. Paragraph [0003] of the present application states that “[s]tandard electrical feedthrus [shown for example in Fig. 1] are often much too large for many applications, *particularly for micro-electro-mechanical-systems (MEMS)*. For example, an electrical feedthru (2) shown in Fig. 1 is considered a very small one, possibly the smallest currently available, and it requires a preformed ceramic or epoxy insulator capsule (4) that is at least 750 μm

thick.” (Emphasis added). The application itself states that the prior art feedthru of Fig.1 is too big for MEMS application (with each capsule (4) “at least 750 μ m thick”). The “Background” goes on to report that “[r]eferring to Fig. 1...the electrical feedthru is at least 19.0 mm in diameter.” Applicant is unaware of any MEMS device that could use an electrical feedthru that is 19.0 mm in diameter. Fig. 1 does not disclose a feedthru suitable for use with a MEMS device.

Further, even if Fig. 1 represented an electrical feedthru suitable for use with a MEMS device, Fig. 1 does not “show...a MEMS package.” The prior art feedthru of Fig. 1 does *not* comprise a MEMS package, it is a standard feedthru. Therefore, the very premise of the entire § 103(a) rejection is flawed, and the rejection should be withdrawn on this basis alone.

However, the mischaracterization of Fig. 1 as a “MEMS package” when the exact opposite is taught (Fig. 1 illustrates the *shortfalls* of prior feedthrus that are not small enough to service MEMS devices) is not the only error relating to the Office’s characterization of Fig. 1. As mentioned above, the Office also stated that Fig. 1 shows “dielectric adhesive 30’.” Fig. 1 does not have an element 30’, nor does the description that accompanies Fig. 1 ever mention a “dielectric adhesive.”

Accordingly, if the Examiner is able to further clarify what Fig. 1 actually does teach and continues to reject the claims, any further action by the Office must be non-final to give Applicant adequate opportunity to respond to a correct allegation.

In addition, even if Fig. 1 did show all that the Office asserted, the § 103(a) rejection is improper. The Examiner correctly points out that Fig. 1 does not disclose a DLC over the transmission lines. Nevertheless, the Examiner alleges that the ‘025

patent teaches micro-coating an electric conductor with a DLC, and that it would have been obvious to one of ordinary skill in the art to add a DLC to the electrical feedthru conductors of Fig. 1 to reduce wear on the wires.

Applicant notes that the '025 patent is non-analogous art with respect to the present invention. As the Examiner knows, a prior art reference must be analogous to be used for a § 103 rejection. *In re Clay*, 966 F.2d 656, 658-59 (Fed. Cir. 1992). Moreover, "[I]f a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection. An inventor may well have been motivated to consider the reference when making his invention. If it is directed to a different purpose, the inventor would accordingly have less motivation or occasion to consider it." *Id.* The problems addressed by the present invention and those recited by the '025 patent are completely different. The purpose of the '025 patent appears to be manufacturing wire and reducing wear at the ends thereof. The Office states that one of ordinary skill in the art of feedthru development would want to add a layer of DLC to reduce wear. However, there is no recitation of wear as a problem with electrical feedthrus. The '025 patent addresses wire production, and, as far as Applicant can tell, it has nothing to do with electrical feedthrus. Further, the Office did not articulate any reason that one of ordinary skill in the art would go to wire production techniques in solving the problem of creating smaller feedthrus. Applying the present facts to the law communicated by the Federal Circuit, one of ordinary skill in the art would have "less" (or no) motivation to consider the '025 patent because the purposes of each invention and the problems each address are different.

Not only is the '025 patent non-analogous art, there is no motivation for one of ordinary skill in the art to combine the reference teachings. The feedthru of Fig. 1 already has an insulator that works for its intended purpose. A person of ordinary skill in the art would have no motivation to add to the complexity of the larger feedthru. Only with the aid of impermissible hindsight, using the present invention as a guide, could one of ordinary skill in the art possibly recognize the burgeoning problem of needing smaller feedthrus and address it by adding microcoatings (which may eliminate large insulating capsules of the prior art). Neither cited reference recognizes the problem or suggests the claimed solution. Accordingly, the combination of the '025 patent with Fig. 1 is improper and all the § 103(a) rejections should be withdrawn.

Moreover, the Office has failed to identify any actual reference teaching that discloses or suggests a DLC for an *electrical feedthru* as claimed. Therefore, Applicant respectfully requests that the Examiner submit an affidavit in accordance with 37 C.F.R. §1.104(d)(2) substantiating the allegation that adding a DLC to *electrical feedthrus*--not to common wires--would have been obvious. Applicant also requests opportunity to contradict the Examiner's affidavit as prescribed by the rule.

In addition, with respect to many of the rejected claims, the Office has failed to show that the cited references teach all of the limitations of the claim (as required for a proper § 103 rejection). For example, claim 9 recites "two or more layers of the coating" and claims 35 and 63 recite "multiple layers." The Office states that forming two or more layers of various thicknesses would have been an obvious matter of routine experimentation, but provides no support for the statement. The cited references and the Office action also completely fail to address controlling capacitance of the electrical

feedthru as recited in claim 69. Yet the standard for a §103 rejection is that the each limitation must to be shown in a reference or supported by an Examiner's affidavit. Therefore, the Office must show an actual teaching in as complete detail as is contained in the claim, or withdraw the rejection. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Because there is no cited reference disclosure of two or more DLC layers, especially with respect to an electrical feedthru (not just a wire), Applicant respectfully requests that the Examiner submit another affidavit in accordance with 37 C.F.R. §1.104(d)(2) substantiating the allegations. Applicant again requests opportunity to contradict the Examiner's affidavit as prescribed by the rule.

Similarly, at least claims 21-23, 30, 31, and 42 recite specific conductive transmission line densities that are not shown, or even alleged to be shown, by Fig. 1 or the '025 patent. Fig. 1 is much too large to provide the recited densities, and as the Examiner knows, the invention must be shown in as complete detail as is contained in the claim. *Id.* Claims 21-23 were not addressed by the Office and are not taught or suggested by the cited prior art. Moreover, any reasoned rejection relating to density must be non-final to give Applicant an opportunity to respond. Applicant currently has nothing to respond to with regard to pin density. The Office action is silent on the issue. Applicant contends that the Office did not even allege that claims 21-23, 30, 31, and 42 are taught by the prior art, and in fact these claims each contain limitations that are not shown by the cited references. Therefore, because none of the cited references teach the densities claimed, Applicant again respectfully requests that the Examiner submit another affidavit in accordance with 37 C.F.R. §1.104(d)(2)

substantiating the rejection of claims 21-23, 30, 31, and 42 as obvious. Applicant again requests opportunity to contradict the Examiner's affidavit as prescribed by the rule.

Applicant also points to claim 67, which recites method steps that are not taught (or alleged by the Examiner to have been taught) by the cited references. None of the cited references teach heating and cooling the housing to arrange the pin in a compressive fit. Applicant assumes that the rejection of claim 67 was in error. However, if the rejection remains, absent any reference teachings relating to the limitations of claim 67, Applicant respectfully requests that the Examiner submit an affidavit in accordance with 37 C.F.R. §1.104(d)(2) substantiating the rejection. Applicant again requests opportunity to contradict the Examiner's affidavits as prescribed by the rule.

In addition, claim 73, for example, recites "two distinct environments." Neither Fig. 1 nor the '025 patent disclose two distinct environments. And neither Fig. 1 nor the '025 patent teach or suggest "coating an inner surface of a hole through a housing [of an electrical feedthru] with a diamond-like carbon coating" as recited in claim 75. The Office does not even allege that either reference (Fig. 1 and the '025 patent) teaches coating a hole through the housing with DLC. Again, any future rejection related to these claims must be non-final to afford Applicant a chance to respond to an articulated rejection with a measure of specificity. If the limitations of the rejected claims are actually disclosed in the cited references, Applicant cannot find the disclosure. Therefore Applicant respectfully requests details (column and line number, for example) identifying the teachings related to each claim limitation.

Further, because there is no disclosure by any of the cited references of two distinct environments or coating a hole through a housing of an electrical feedthru with a DLC, Applicant respectfully requests that the Examiner submit two more affidavits in accordance with 37 C.F.R. §1.104(d)(2) substantiating the obviousness rejections. Applicant again requests opportunity to contradict the Examiner's affidavits as prescribed by the rule.

The Examiner rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Fig. 1 of the present specification in view of the '025 patent and further in view of U.S. Patent No. 6,375,826 to Wang et al. ("the '826 patent"). Applicant respectfully traverses the rejection.

Applicant strongly asserts that the '826 patent is non-analogous art with respect to the present invention. *In re Clay*, 966 F.2d 656, 658-59 (Fed. Cir. 1992). The '826 patent is directed to stents used in the medical field for angioplasty. In Applicant's view, there is no tenable argument that cardiovascular stents are analogous to electrical feedthrus and that one of ordinary skill in the art of electrical feedthru design would be motivated to look to cardiovascular stents to solve electrical feedthru deficiencies. Applicant cannot conceive anything that would lead one of ordinary skill in the art of electrical feedthru development to look to a polished cardiovascular stent. In addition, claim 3 depends from claim 1 and should be allowable for at least the reasons offered above. Accordingly, Applicant respectfully requests that the rejection of claim 3 be withdrawn.

The Examiner rejected claims 15-17, 65, and 72 under 35 U.S.C. § 103(a) as being unpatentable over Fig. 1 of the present specification in view of the '025 patent

and further in view of U.S. Patent No. 6,362,424 to Honkomp et al. (“the ‘424 patent”). Applicant respectfully traverses the rejection.

Claims 15-17, 65, and 72 depend from claims that should be allowable. Further, the claims contain limitations not taught or suggested by the cited references. The Examiner alleges that the ‘424 patent teaches a dielectric adhesive 30 that would have been obvious to use with the other reference teachings. Nevertheless, Applicant points out that none of the references teach the limitations actually recited in the claims. Namely, claim 15 recites “a *secondary* coating disposed over the dielectric material.” None of the cited references teach “secondary coatings.” At most, the cited references teach a first coating for wire (not electrical feedthrus). Even if all the cited references were accurately characterized and analogous, they must identically teach the limitations of the claims as the language of the claims presents them. There simply are no cited references teaching “secondary coatings,” especially for electrical feedthrus. Moreover, there are also no specific recitations of the materials recited in claim 17. We have another instance of a rejection not fully supported by the references themselves. The Office must fully support all rejections with actual reference teachings, or provide supporting affidavits. Accordingly, if the rejection of claims 15-17, 65, and 72 remains, absent an actual reference teaching, Applicant respectfully requests that the Examiner submit two more affidavits in accordance with 37 C.F.R. §1.104(d)(2) substantiating the allegations that: (1) it would have been obvious to add a “secondary coating” to a primary coating of an electrical feedthru even though no references teach secondary coatings, and (2) that the materials specified in claim 17 would have been obvious to use despite the fact that none is

disclosed by the cited references. Applicant again requests opportunity to contradict the Examiner's affidavits as prescribed by the rule.

The Examiner rejected claims 18 and 66 under 35 U.S.C. § 103(a) as being unpatentable over Fig. 1 of the present specification in view of the '025 patent and further in view of U.S. Patent No. 3,998,515 to Panek. ("the '515 patent"). Applicant respectfully traverses the rejection.

Applicant notes that claim 18 depends from claim 15, and the rejection of claim 18 was not made over the '424 patent (*i.e.*, claim 15 was rejected over the '424 patent, and yet claim 18, which depends from claim 18, was not rejected over the '424 patent). Any future rejection that combines the '515 patent with the '424 patent must be non-final to afford Applicant a chance to respond, especially considering that such a rejection would attempt to combine four (4) reference teachings without the aid of impermissible hindsight. The '515 patent does not disclose a "secondary coating of dielectric material" as recited in claim 15 (and thus recited by claim 18 as well). The '515 patent fails to disclose both *secondary* coatings, and *dielectric material*. Further, the '515 patent cannot disclose "a metal layer brazed between the dielectric coating and the housing" as claimed, because there is no "dielectric coating" disclosed by the '515 patent. With regard to claim 66, the '515 patent does not teach "metalizing an outer surface of the conductive pin over the layer of highly dielectric material." None of the cited references teach metalizing the conductive pin. Without a specific reference identically teaching the limitations as claimed, including the "metalizing" limitation, Applicant respectfully requests that the Examiner submit another affidavit in accordance with 37 C.F.R. §1.104(d)(2) substantiating the allegation that it would

be obvious to “metalize the outer surface of the conductive pin over the layer of highly dielectric material.” Applicant again requests opportunity to contradict the Examiner’s affidavits as prescribed by the rule.

The Examiner rejected claims 19 and 68 under 35 U.S.C. § 103(a) as being unpatentable over Fig. 1 of the present specification in view of the ‘025 patent and further in view of U.S. Patent No. 4,252,394 to Miller. (“the ‘394 patent”). Applicant respectfully traverses the rejection.

Claim 19 has been amended to recite a radial compression fit, and claim 68 depends from claim 67, which should be allowable as argued above.

The Examiner rejected claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Fig. 1 of the present specification in view of the ‘025 patent and further in view of U.S. Patent No. 6,793,849 to Gruen et al. (“the ‘849 patent”). Applicant respectfully traverses the rejection.

Applicant notes that the §371 date for the ‘849 patent is 12 December 2003. The filing date of the present application is 25 November 2003. Accordingly, the Office has not established the ‘849 patent as prior art.

In addition, the ‘849 patent is another example of non-analogous art. The ‘849 patent is directed to n-type doping of UNCD films. The ‘849 patent has nothing to do with electrical feedthrus, and may not be properly combined with Fig. 1 of the present application or any of the other cited references. The problems associated with the ‘849 patent have no relation to the electrical feedthru problems associated with the present application. There is no articulated correlation between the references. Applicant did not assert invention of MPCVD, Applicant claims the combination of

MPCVD with the other claim limitations for an electrical feedthru. The combination must be motivated and analogous for a proper rejection, and in the present case both motivation and proper analogy are missing. What the Office has done is a classic example of “us[ing] the claimed invention as an instruction manual or ‘template’ to piece together the teaching of the prior art so that the claimed invention is rendered obvious...One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *In re Fritch*, 23 USPQ 2d 1780 (Fed. Cir. 1992). Applicant contends that one of ordinary skill in the art of electrical feedthru design would not look to the '849 patent when there is no relation between the cited references. Applicant submits that the Office has rejected claim 24 only by using impermissible hindsight reconstruction and non-analogous art, picking and choosing among unrelated, isolated references, and that the '849 has not been established as prior art.

Therefore, in view of the preceding, Applicant respectfully requests that all rejections under 35 U.S.C. § 103(b) be withdrawn.

Conclusion

Applicant respectfully submits that all claims should now be in condition for allowance. Applicant respectfully requests that the Examiner telephone the undersigned attorney if there are unresolved matters in the present application so that the examination process can be expedited.

Applicant believes that no fees are due in connection with this Amendment.
The Commissioner is hereby authorized to charge or credit any deficiency or
overpayment to Deposit Account Nº. 08-2623.

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Respectfully submitted,



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